United States Department of Agriculture
Grain Inspection, Packers and Stockyards Administration
Federal Grain Inspection Service

Directive 9290.16 7/30/99

IMPROVING SERVICE DELIVERY AND ENHANCING INFORMATION SHARING BETWEEN THE OFFICIAL AGENCIES AND THE OFFICIAL FGIS SYSTEM

1. PURPOSE

This Directive transmits the Grain Inspection, Packers and Stockyards Administrations (GIPSA) policy and technical requirements for adapting computer automation and Internet technology into the official grain inspection and weighing programs provided by the Federal Grain Inspection Service (FGIS), delegated states, and designated agencies.

2. REPLACEMENT HIGHLIGHTS

This Directive updates the Directive issued on April 1, 1997. These changes reflect the ongoing pilot test of certificate software and Internet procedures that started in June 1998. Please read this Directive carefully. Attachments have undergone a number of important changes and should be reviewed thoroughly, especially by those Official Agencies (OA's) developing their own certificate software.

3. BACKGROUND

Computer technology is becoming more and more a part of our everyday business; so is the Internet. Computers (with modems) are used for certificate preparation, information sharing, electronic mail, and other routine business applications. The Internet provides universal access to E-mail and bulletin boards termed Home pages. In addition, it is economically practical for Government and private business to develop their own Internet file servers that can be specifically accessed for secure data transfer and sharing of information through secure Home pages.

FGIS recognizes the need to continue its efforts to provide improved service delivery and more efficient information sharing. Consequently, FGIS believes it is time to lead the official grain inspection and weighing programs into implementing file standards and computer and Internet telecommunications technology to improve the efficiency and integrity of our services while providing our customers with services they desire and expect.

The grain industry is migrating to a paperless grain marketing system and we must be ready to participate in this change. Many major grain companies are starting to demand electronic transmissions of inspection and weighing results to their central computer system. Because the grain industry recognizes the value and benefits of electronic commerce, the National Grain and Feed Association (NGFA) has implemented plans to use a new computer-based software system that will offer the entire industry electronic exchange of information. This system is known as Electronic Data Interchange (EDI).

This EDI system will handle all commercial transaction information involved in grain marketing, including inspection and weighing information.

FGIS has initiated a number of major automation and telecommunications related projects to improve the overall performance of the official inspection and weighing programs. These projects, which include a quality assurance/quality control (QA/QC) initiative; a National Quality Database System (NQDBS); inspection automation initiatives; generic certificate and Intermarket Tracking programs; electronic access to agency information and directives through Internet technology; and wide area E-mail capabilities, point up the fact that automation and telecommunications are playing an increasingly important role in the way FGIS meets its responsibilities under the United States Grain Standards Act and the Agricultural Marketing Act of 1946. Taken together with the NGFA initiative and the automation that the industry already has in place and is continuing to develop, automation, access to Internet E-mail, and the ability to electronically transfer and receive data are fast becoming base requirements to conduct business competitively in the grain industry.

Through the years, FGIS has developed a computer network that links all our field offices with Headquarters, both for E-mail and data transfer. Unfortunately, the OAs are not a part of this network. As we continue to improve the electronic network, we recognize this situation must be corrected in order to have an optimal national program. Most importantly, some of our ADP initiatives, such as QA/QC, the Intermarket Tracking program, and the NQDBS, will make it an operational necessity for the OAs to be part of our network. FGIS plans to use the Internet and Internet technologies to make this as inexpensive for the OAs as possible.

Because the NQDBS will require certificate data in a specific format, the FGIS automated certification program will require major modifications. It also means that the OAs will have to modify their automated certificate software programs since all certificate data will have to be databased in the standard FGIS format (see attachment 1). The OAs will also be required to electronically transfer certificate data to Washington, D.C., on a recurring basis. One of the advantages of storing the certificate data in the standard format is that

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1/ See **Section 6. QUESTIONS** for the name and phone number of the NGFA and FGIS representatives.

the FGIS records can be saved to a file and then read into the special EDI software developed by NGFA. This software is now available for OA and field office (FO) purchase. 1/ In addition, the industry can use the standard format to more easily interface their data transfer programs with FGIS and OA sites. This will facilitate the setting up of electronic transfer of certificate data with them.

To better assess the impact on the OAs to meet the new requirements and their willingness to incur the necessary expenses, FGIS solicited information from the OAs in September 1996. The information indicates most OAs are willing to spend the time and money required to fulfill our requirements. As a matter of fact, a significant number of official agencies have already upgraded or are in the process of upgrading their microcomputers to reflect the standard configuration available in today's market. 2/ This configuration is more than adequate to meet the FGIS requirements as far as computer equipment is concerned. Many others are technically capable of adapting to a national electronic network with a nominal financial investment.

It was also determined that a majority of OAs use one of two commercially available certificate software packages and are willing to pay the cost to have their software upgraded. However, a significant number of OAs have their own in-house programs, which means dedicating substantial resources to modify the software. A few agencies, however, question the need for automation since their market is surviving without it and the benefits of automation are not significant. FGIS is in the process of developing a strategy that will allow the maximum flexibility of transition to the new requirements.

FGIS has determined that adapting computer automation and Internet technology to the official grain inspection and weighing programs is essential for the survival of these official programs. Furthermore, it is imperative that we act now to initiate these changes so that we may provide our customers with the quality of service they expect and deserve. To this end, FGIS is prepared to lead the change to utilize computer automation and Internet technology within the official system. FGIS is also interested in structuring its system so it is compatible with the EDI initiative developed by the NGFA. Moreover, initiating this activity will benefit the entire official inspection and weighing system through the consolidation of inspection and weighing data and the ability to generate a wide range of valuable reports to meet the future demands of our programs.

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2/ A standard microcomputer configuration in today=s market includes at least one gigabyte of hard disk space (for atabasing certificate data), a Pentium processor for speed, and a 28.8 KB baud modem for interfacing with a local Internet provider for Home page browsing, E-mail, and data transfer.

4. POLICY

FGIS is committed to adapting computer automation and Internet technology into information sharing among those involved in providing or receiving official services; to its national inspection and weighing programs to facilitate communication and reduce administrative costs for FGIS and the OAs; and to support our QA/QC initiatives.

FGIS will use the information collected to (1) reduce or eliminate manual record collection efforts (i.e., monthly inspection/weighing volume reports); (2) establish a grain quality database to enhance FGIS QA/QC programs (i.e., Intermarket Tracking System and stratified sampling for monitor samples); and (3) establish a database to better evaluate the impact of potential standards and procedural changes.

Information collected through this system is designed for internal use by FGIS management and OA management to promote efficient information sharing and to provide the necessary tools to measure and improve the quality of service to the grain industry. Although any and all information regarding official services is subject to release based on the provisions of the Freedom of Information Act (FOIA), release of this information is pursuant to the exemptions of the FOIA. Consequently, FGIS will not release any commercial or financial information that is considered confidential and privileged.

FGIS recognizes the need to immediately implement automation efforts focused on single lot inspection services and submitted sample inspection services. Therefore, the targeted implementation date is intended to address these services as the primary effort. At a later date, FGIS intends to implement a similar automation effort to capture information regarding Official Commercial Inspection Services, detailed inspection records for sublots, and other inspection and weighing service information. This additional effort will result in a totally automated official inspection and weighing system.

In order to promote a uniform information and retrieval system, this directive contains the technical information and specifications needed to achieve uniform information management. FGIS has developed this technical information and specification requirements in concert with the NGFA EDI initiative. This action will allow FGIS programs to interact with grain industry commerce needs as the use of EDI expands.

5. EFFECTIVE DATE

All field offices, delegated states, and designated agencies must install the automation requirements by January 1, 1999. Agencies that cannot install the

required automation elements by January 1, 1999, should contact FGIS as soon as they receive this Directive.

6. AUTOMATION AND ANCILLARY EQUIPMENT REQUIREMENTS

FGIS field offices and OAs providing inspection and weighing services are expected to have the following items in place by the designated effective date:

a. Contemporary computer with a modem. 3/ A computer system and a modem are necessary to run the software packages necessary to store and retrieve inspection and weighing records, to run communication software, and to run Internet software provided by the local Internet service company.

b. Inspection and weighing record software. 4/ This software is necessary to collect and store summary inspection and, if applicable, weighing records. The software may be multi-functional to complete certificates and provide the basis for other administrative functions (e.g., customer billing). In order to merge all information into a national database, the file records must conform to a standard record format. This standard format, which includes all field requirements for EDI, will allow FGIS programs and the OAs to interact with grain industry commerce needs as the use of EDI expands. Attachment 1 contains specifications to standardize the data file records.

c. Local Internet provider. Each agency must have access to the Internet through a local vendor. Internet technology will provide locations with the ability to transfer file records to the NQDBS. Internet technology will also allow locations the option of receiving information from FGIS via a Home page located on an FGIS file server. The local Internet vendor is also responsible for helping to install the requisite software, maintenance, and trouble-shooting in the local area as far as software and telecommunications problems are concerned.

d. E-mail capability. Internet E-mail capability, provided through a local service vendor, will permit locations to send and receive messages and information between any location within the official inspection and weighing programs. Further, E-mail will allow locations to communicate with its customers and others who have Internet mailboxes.

3/ A standard microcomputer configuration in today=s market includes at least one gigabyte of hard disk space (for databasing certificate data), a Pentium processor for speed, and a 28.8 KB baud modem for interfacing with a local Internet provider for Home page browsing,E-mail, and data transfer.

4/ Note software developers: Please review attachments 1-4.

e. Facsimile (FAX) capability. FAX capability will allow locations to send and receive messages from any location within the official inspection and weighing programs. This capability also allows receipt or transmission of documents to others having the same capability.

f. Dedicated phones lines. FGIS recommends that the microcomputer that has the certificate software and an internal or external modem also be dedicated to the Internet interface. This computer should have its own dedicated phone line. In addition, if a separate FAX machine is used, it should have its own dedicated phone line (or the equivalent through an electronic device that can separate voice and FAX transmissions).

7. QUESTIONS

Please direct any technical questions regarding hardware or software requirements to Theresa DeJaynes, tdejayne@gipsadc.usda.gov, (816) 969-7955.

Please direct any technical questions regarding EDI requirements or EDI software to Mr. Kendall Keith, National Grain and Feed Association at (202) 289-0873; or Ms. Julie Walker, General Electric Information Systems (GEIS) at (301) 340-5581.

David Orr, Director
Field Management Division

Attachments

ATTACHMENT 1
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National Quality Database System (NQDBS)

The goal of the NQDBS project is to transfer inspection quality and weighing services data into a national database in such a manner as to eliminate repetitive data entry and to make data available for analysis and reporting in a timely manner. Several initiatives must be undertaken simultaneously to meet this goal:

A national database must be designed around requirements expressed by analysts and other customers for grain quality and weighing data.

A communications infrastructure must be put in place to carry data transfers among official agencies, field offices, headquarters offices, and data consumers, such as grain companies.

Suitable equipment must be installed at the points where inspection and weighing information originates in order to capture data efficiently not only for integration into the national system, but also to add value to the local office's business practices.

Constraining these initiatives is the vision of a collection of data systems that talk to each other efficiently without ambiguity or redundancy. In order for that to happen, it is not necessary for each office to use the same equipment or software, nor to subsume their own data management requirements to those of a central organization. But, it will be necessary for each office to make itself available to communicate.

The attached document is intended as a step toward making that communication possible. It represents a strategy for exporting data from disparate collection platforms into a common format, using techniques that are common to PC based data management software packages. Files produced according to the standards laid out in this document could be easily transferred into the national inspection quality and weighing database and are also suitable for submission into an EDI service center or as input to EDI translation software.

The first step in proposing a data collection strategy was to determine exactly what data needs to be collected. This was done by surveying the various forms currently in use, reviewing the current databases on the headquarters minicomputer, talking with analysts who currently use inspection and weighing data, and talking with the representatives from the EDI project (which has closely related goals).

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Proposed File Formats for FGIS Inspection Data

The purpose of this document is to describe the format of a data file suitable for exporting inspection and weighing data from the variety of data entry programs used by official inspection agencies and field offices. This data file could be used as input to an EDI service center or to the FGIS national grain quality database. Comments on the proposed data formats are welcome. Please submit comments to Theresa DeJaynes at tdejayne@gipsadc.usda.gov (816-969-7955).

File Structure

Data records are submitted in delimited ASCII flat files. Each record is terminated by the DOS end-of-line sequence, CR-LF. Fields (whether empty or not) are separated by a delimiting comma (,), except that a sequence of empty fields at the end of the record may be omitted. Fields that contain data are enclosed in double quotes. There are no padding and justification requirements. Formats are: character, integer, and decimal. (For our purposes, integer and decimal are not binary; they are ASCII strings representing valid integer and decimal numbers.) **The comma(,) delimiter may be replaced by some other delimiter for those who are using software packages that do not support the comma**.

There are four types of data record: inspection summary (I), inspection detail (D), weighing summary (W), and weighing detail (L)**.** The inspection summary record is used to report inspection services performed on lots and submitted samples. Where CuSum averaging is performed, the inspection detail record is used to report on individual samples taken. Likewise, the weighing record is used to report on weighing services. Weighing detail records are used for shipload weighing services and correspond to the line items in a weight-loading log. Most agencies will not have to deal with detail records.

Summary and detail records stand in a one-to-many relationship and require a unique key in the summary record that can be referenced by the detail records, as illustrated in the diagram below. **For the inspection summary records, the key is the ServicePointNumber + LotNumber; for weighing summary records, the key is the ServicePointNumber + Load Order Number**. Weight detail records also stand in a many-to-one relationship with inspection detail records; each weight detail record references an inspection detail record by Lot Number + Sample Number.

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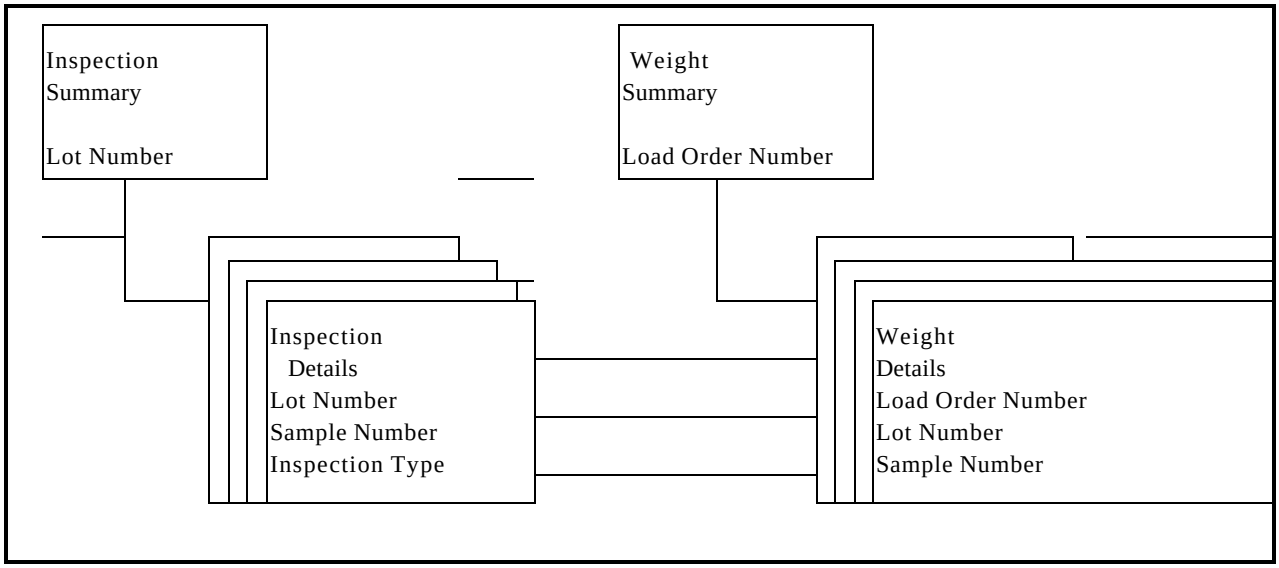

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Proposed File Formats for FGIS Inspection Data

The structures of these records are laid out in the tables on the following pages. The column labeled AField name@ gives an arbitrary name used to identify each field. AFormat@ is one of Achar,@ Ainteger,@ or Adecimal@ as explained above. AFGIS@ and AEDI@ columns indicate whether the field is required by the FGIS and/or EDI systems; AReq@ is Arequired,@ AOpt@ is Ainclude if present,@ **blank means Anot used by this system.@** AValue(s)@ indicates permissible value(s) for the field. Many of these fields will use codes which will be supplied and updated as necessary throughout the life of the project as requirements change in the inspection industry. The ANotes@ column attempts to explain things that are not obvious.

Summary Inspection Record

Field Name	Format	FGIS	EDI	Value(s)	Notes
RecordType	Char	Req	Req	I	Summary Inspection Record
ServicePointNumber	Integer	Req	Req	GIPSA assigned Six-digit, unique designator	Location of office that printed certificate.
AnalysisLocation	Integer	Opt		GIPSA assigned Six-digit, unique designator	Location of office that performed the sample analysis.
LotNumber	Integer	Req		**YYYYMMDD** plus serial number (**LOT number**)	**Required for both SAMPLE LOT and SUBMITTED samples. LOT NUMBERS MUST start over each day.** YYYYMMDD date is date LOT NUMBER is created.
AgencyFileSampleId	Char	Req		Free form	Agency assigned label for file sample. Accommodates existing agency filing procedures.
SubmittedSampleId	Char	Req		Free form	**Required for submitted samples only.**
InspectionType	Char	Req	Req	O, R, A, B, S	Original, Reinspection, Appeal, Board Appeal, and Supervision
AppealNumber	Integer	Opt			Currently used for appeal tracking.
Location	Char	Req		Free Form	Location where sample obtained.
City	Char	Req		Free Form	City where sample obtained.
State	Char	Req		2 Digit	State abbreviation where sample obtained.
Telephone	Char		Req	Include area code	Phone number of Agency point-of-contact.

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Proposed File Formats for FGIS Inspection Data
Summary Inspection Record

Field Name	Format	FGIS	EDI	Value(s)	Notes
OrderedBy	Char	Opt	Req	Free form	Name of person or company who requested the inspection.
CertNumber	Integer	Opt	Req	Unique number from printed cert.	Required by EDI if certificate issued.
CertDate	Char	Req	Req	**YYYYMMDD**	**System generated: (1) for FGIS-Certificate Print date: (2) for EDI-Transmission date.**
CertTime	Char	Opt	Req	HHMM	**System generated EDI transmission time.**
ServiceType	Char	Req	Req	OL, CL, OS, CS, W, EX	Official Lot, Official Commercial Lot, Official Submitted, Official Commercial Submitted, Warehouse, Export
PurposeCode	Char	Req	Req	O, C, R, V	Original, Canceled, Reissued, Corrected and Verified
OldCertNumber	Integer	Opt			Previous Number replaced by this certificate. Required if replacement issued.
EDICode	Integer		Req	1, 9, 12	Duns, Duns+4, Phone, Qualifies following field.
EDIAddressee	Integer		Req	One of the above identifiers	Both EDI fields must be either blank or filled.
Movement	Char	Req	Opt	I, O, L, E	In, Out, Local, Export. **BLANK for Submitted Sample.**
Destination	Integer	Opt		Four digit COUNTRY code (**9999** designates **UNKNOWN** destination)	**Required for EXPORT samples.** From Commerce Dept., published codes. **BLANK for submitted samples.**
CarrierType	Char	Req	Opt	T, R, B, C, S, U, L, V, H, K, O	Truck, Rail, Barge, Container, Ship, Unit Train, Lash Barge,

					Covered Hopper, Open Hopper, Sacked, Other. **BLANK for submitted sample.**

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Proposed File Formats for FGIS Inspection Data
Summary Inspection Record

Field Name	Format	FGIS	EDI	Value(s)	Notes
CarrierId	Char	Req	Opt	Free form	Must match ID on carrier, no prefixes except vehicle licenses to include State, e.g., MD-11C345. **Blank for submitted sample.**
SamplingMethod	Char	Req	Opt	P, M, V, C, L, S, D, W, O, H	Probe, Mechanical Diverter, Diverter, Ellis Cup, Pelican, Shallow probe, Door, Woodside, Other, Mechanical Probe. **Blank for submitted sample.**
TopFeetSampled	Integer	Opt		Blank or positive	Use when probe is incomplete. **BLANK for submitted sample**.
DateSampled	Char	Req	Opt	**YYYYMMDD**	Optional for submitted sample.
TimeSampled	Char	Opt	Opt	HHMM	Optional.
Grade	Char	Req	Req	1C, 1, 2, 3, 4, SG, NG	Add + for Aor better.@ **Use NG for no grade.**
Grain	Char	Req	Req	One character	FGIS Generic code.
GrainClass	Char	Opt	Opt	One to four characters	Required by FGIS if graded for class.
Quantity	Integer	Req	Req		Total for lot. **Represents sample SIZE for submitted sample**.
UnitOfMeasure	Char	Req	Req	LB, MT, BU, GR, QT TL, CL, BL, PL, CB, DL, OL	Pounds, Metric ton, Bushel, Grams, Quarts Truck lot, Car lot, Bulkhead lot, Part lot, Combined lot, Divided lot, Other lot,
InspectorNumber	Integer	Req		LIS or ACG code	GIPSA assigned ID for inspector.
DateInspected	Char	Req	Req	**YYYYMMDD**	**Keyed entry.** Date Service

					Completed. FGIS date on certificate.
TimeInspected	Char	Opt	Opt	HHMM	**Keyed entry.** Time Service Completed.

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Proposed File Format for FGIS Inspection Data
Summary Inspection Record

Field Name	Format	FGIS	EDI	Value(s)	Notes
Remarks	Char	Opt	Opt	Free form to 250 characters	**REQUIRED by FGIS if remarks present.** General remarks for the sample.
Remarks1	Char	Opt	Opt	Free form to 250 characters	**REQUIRED by FGIS if remarks present.** General remarks for the sample (Cont).
FactorCode 1/	Char	Req	Req	One to four characters	GIPSA standard abbreviations.
InspectionResult	Integer or Decimal	Req	Req		**Condition**: 0 for Acondition not present,@ 1 for Acondition present.@ **Percent**: Use an integer or decimal number to the precision required by the factor, (i.e., tenths, hundredths). **Count**: Use .33 and .67 for 1/3 and 2/3, respectively.
FactorRemarks	Char	Opt	Opt	Free form to 160 characters	Explanatory information, e.g., A13 percent moisture basis@ for a protein test.

1/ Factor Code, Inspection Result, and Factor Remarks are repeated as a **SET** up to 20 times.

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Proposed File Formats for FGIS Inspection Data
Detail Inspection Record

Field Office	Format	FGIS	Value(s)	Notes
Record Type	Char	Req	D	Detail Inspection Record.
Lot Number	Integer	Req	YYYYMMDD plus serial number	Same number as in the associated lot record.
Sample Number	Integer	Req	Serial number	Unique serial number for each sample taken from a lot. Does not change.
Level	Char	Req	L, C, S	Sublot, component, subsample.
Inspection Type	Char	Req	O, R, A, B, S	Original, Reinspection, Appeal, Board Appeal, Supervision.
Appeal Number	Integer	Opt		
Date Sampled	Char	Req	YYYYMMDD	
Time Sampled	Char	Req	HHMM	
Date Inspected	Char	Req	YYYYMMDD	Date of inspection.
Time Inspected	Char	Req	HHMM	Time of inspection.
Quantity	Integer	Req		Amount of grain from which this sample was taken.
Unit of Measure	Char	Req	LB, MT	Pounds, metric ton.
Sample Size	Integer	Opt		Size of this sample.
Sample Units	Char	Opt	LB, GR	Pounds or grams.
Inspector ID	Integer	Req	LIS or ACG code	GIPSA assigned inspector code.
Remarks	Char	Opt	Free form to 255 characters	General remarks for this sample.
Factor Code 2/	Char	Req	One to four characters	GIPSA standard abbreviations.

Inspection Result	Integer or Decimal	Req		**Condition**: 0 for condition not present, 1 for condition present. **Percent**: Use an integer or decimal number to the precision required by the factor, (i.e., tenths, hundredths). **Count**: Use .33 and .67 for 1/3 and 2/3 respectively.
Factor Remarks	Char	Opt	Free form to 255 characters	Explanatory information, e.g., 13 percent moisture basis for a protein test.

2/ Factor Code, Inspection Result, and Factor Remarks are repeated as a **SET** up to 20 times.

Proposed File Format for FGIS Inspection Data
Summary Weighing Record

Field Office	Format	FGIS	EDI	Value(s)	Notes
Record Type	Char	Req	Req	W	Summary Weighing Record.
Grain Location	Integer	Req		Six digit, unique service point number	GIPSA assigned as used in GIWIS, EGIS, GIMS.
Cert. Issued At	Integer	Opt		Six digit, unique service point number	GIPSA assigned as used in GIWIS, EGIS, GIMS.
Telephone	Char		Req	Include area code	Phone number of Agency point-of-contact.
Ordered By	Char	Opt	Req	Free form - max 35 characters	Name of person or company who requested the inspection.
Cert. Number	Integer	Opt	Req	Unique number from printed cert	Required if certificate issued.
Cert. Date	Char	Opt	Req	YYYYMMDD	
Cert. Time	Char	Opt	Req	HHMM	
Service Type	Char	Req		X, Y, I, II, III, A, H, O, D, T	Class X, Y, I, II; Affidavit, House; Origin, Destination, Third Party unofficial
EDI Code	Integer		Req	1, 9, 12	Duns, Duns+4, Phone; Qualifies following field.
EDI Addressee	Integer		Req	One of the above identifiers	Both EDI fields must be either blank or filled.
Date Started	Char	Req	Req	YYYYMMDD	Start of weighing.

Time Started	Char	Opt	Req	HHMM	Start of weighing.
Dated Ended	Char	Req	Req	YYYYMMDD	End of weighing.
Time Ended	Char	Opt	Req	HHMM	End of weighing.
Movement	Char	Req	Opt	I, O, L, E	In, Out, Local, Export.
Carrier Type	Char	Req	Opt	T, R, B, C, S, U, L, V, H, K, O	Truck, Rail, Barge, Container, Ship, Unit Train, Lash Barge, Covered Hopper, Open Hopper, Sacked, Other

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Proposed File Formats for FGIS Inspection Data
Summary Weighing Record

Field Office	Format	FGIS	EDI	Value(s)	Notes
Carrier ID	Char	Req	Opt		Must match ID on carrier, no prefixes except vehicle licenses to include State, e.g., MD- 11C345.
Grain	Char	Req	Req	Generic, single character	General grain code without subclassing.
Estimated Weight	Positive Integer or Decimal	Req	Req		
Gross Weight	Positive Integer or Decimal	Req	Req		
Tare Weight	Positive Integer or Decimal	Req	Req		
Net Weight	Positive Integer or Decimal	Req	Req		
Unit of Measure	Char	Req	Opt	BU, C4, CH, CW, GR, LB, LG, MT, NB, PN, QT, SU, TC	Bushel, Carload, Container, Hundred pound weight, Gram, Pound, Long ton, Metric ton, Barge, Pounds net, Quart, Short ton, Truckload.
Weigher ID	Integer	Req		License number	GIPSA assigned number.

Weigher Name	Char	Opt		Normally, First MI Last, no commas, no periods	
Load Order Number	Char	Opt		Free form	Required for shipload lots; used to cross-reference detail records.
Inspection Lot Number	Integer	Opt		YYYYMMDD plus serial number	Required if an inspection was also done. Foreign key to inspection summary record.
Remarks 3/	Char	Opt			Limit of 255 characters.

Proposed File Formats for FGIS Inspection Data
Detail Weighing Record

Field Office	Format	FGIS	Value(s)	Notes
Record Type	Char	Req	L	Detail Weighing Record
Grain Location	Integer	Req	Six digit, unique service point number	Required. GIPSA assigned as used in GIWIS, EGIS, GIMS.
Load Order Number	Char	Req	Free form	Required for shipload lots. Foreign key to summary records.
Date Started	Char	Opt	YYYYMMDD	Start of weighing.
Time Started	Char	Opt	HHMM	Start of weighing
Date Ended	Char	Opt	YYYYMMDD	End of weighing
Time Ended	Char	Opt	HHMM	End of weighing
Scale Number	Integer	Opt		
Shipping Bin	Integer	Opt		
Net Weight	Positive Integer or Decimal	Req		
Unit of Measure	Char	Req	BU, C4, CH, CW, GR, LB, LG, MT, NB, PN, QT, SU, TC	Bushel, Carload, Container, Hundred pound weight, Gram, Pound, Long ton, Metric ton, Barge, Pounds net, Quart,

				Short ton, Truckload.
Stowage	Char	Req	Follow weight log practices; i.e., hold #:s, R* followed by reason, REWEIGH, Sample, Spills, etc.	
Weigher Name	Char	Req	Initials as used in weight log	
Inspection Lot Number	Integer	Opt	YYYYMMDD plus serial number	Required if an inspection was also done. Foreign key for correlation purposes.
Inspection Sample Number	Integer	Opt		Required if an inspection was done. Foreign key for correlation purposes.
Remarks 4/	Char	Opt		Limit 255 characters.

Programmer's Notes

Of the four record types or file formats specified in Attachment 1, only the **SUMMARY INSPECTION** record is mandatory as far as the certificate software programs are concerned. If an inspection site does official weighing certificates, that file format will also have to be covered by the certificate software **at some later date**.

Software programs will not be required to have the ability to handle inspection and weighing detail records. The detail records will be used by FGIS to develop a CUSUM program to be used by the FGIS Field Offices and those official agencies that handle functions of that kind.

Please use soft tables to store variables that may be subject to change (add, delete, edit) over time. Examples: grain factor abbreviations, inspector number, inspector name, Official Agency Name, telephone number, six-digit location code.

The program should have the following capabilities:

Data entry screens should allow the user to identify or flag a record that is EDI. The user should be able to do this either before or after the certificate has been printed. If it is after, the program should allow the user to enter any required EDI data.

There is also the possibility of the software AUTOMATICALLY recognizing that a particular requester is EDI. This may be done through an EDI soft table that contains the names of the requester (**ORDERED BY** field - see file specifications, Summary Inspection Record, Attachment 1).

The software program, through the use of soft tables, should maximize the number of data entry fields that are automatically filled in.

The software program should be able to transparently detect if an inspection or weighing record (FORM) is Official or Unofficial. Database certificate data at time of printing - called historical records. Automatically detect and prevent duplicate records BEFORE the certificate is printed - flag user. Delete, edit, or use historical records as a template. Transparent archiving of data based records on a periodic basis (see Utilities below).

Field edit checks where applicable (certificate number, in-house filing number, dates, etc.).

Show a date prompt (from system clock) at time of software startup and allow the user to change the date if it is the wrong date. For example: (yes is the default)

Today=s date is Thursday, January 23, 1998. Is this correct (y/n)?

Program UTILITIES should give the user the following ability: Create a daily ASCII FGIS data file in the standard FGIS format (see file specifications, Attachment 1) .

This ASCII file should NOT contain UNOFFICIAL weighing certificate data.

The software should detect and remove duplicate records before the daily ASCII (FGIS) file is created. Software program should, transparently to the user, CONDENSE the ASCII with vendor software that is **compatible** with PKZIP of PKWARE, INC. The file should be condensed BEFORE electronic transmission. FGIS uses PKUNZIP of PKWARE, INC., to return ZIP files to their normal size. **It is important that the file naming convention described below be strictly followed to create this Azip@ file because FGIS will need a uniform file name to structure the data input into the National Quality Database System.**

The naming convention for the daily created ASCII FGIS data file is:

1. Position 1/6. Six digit location code (service point number).
2. Position 7/8. Day file was created (01 thru 31).
3. Position 9. A period.
4. Position 10. Letter denoting month.

J = January	A = April	L = July	O = October
F = February	Y = May	G = August	V = November
M = March	N = June	S = September	D = December

5. Position 11. Last digit of Year file was created (7,8,0 represent the years 1997, 1998, 2000).
6. Position 12. Letter of the alphabet to identify workstation from sites that are using one or more computers to print certificates. It is assumed that no site will have more than 26 workstations printing certificates. If a site has only one workstation, please use the letter AA@ to denote that workstation.

Example: (1) File created on July 4, 1999
Site has a service point number of 998877
One workstation printing certificate

Resulting file name: **99887704.L9A**

(2) File created on May 29, 1998
Site has location code of 223344
There are four workstations printing certificates.

Resulting file names: **22334429.Y8A,… 22334429.Y8B**
22334429.Y8C,… 22334429.Y8D

The naming convention for the self-extracting file is:

1. Position 1/6. Six digit location code (service point number).
2. Position 7/8. Day file was created (01 thru 31).

3. Position 9. A period.
4. Position 10/12. EXE (Software generated).

Example: Using example (2) above, a zipfile titled **22334429**.ZIP is created. The ZIP file contains the four workstation files (**A,B,C,&D**)

The ZIP file is converted to an EXE file using OEM software. When the zip file is converted the RESULTING file name will be:

22334429.EXE

This is the file that is sent to the FGIS FTP SERVER located in Washington, D.C. Note: in this example, the file would be OVERWRITTEN the next time an EXE file is created on the 29th day of a month. Since the NQDB files will be read and deleted from the FTP file server within two days of receipt, the naming convention will effectively make the weekly or bi-weekly file names unique.

STANDARD ABBREVIATIONS

Admixture	ADM	Damaged kernels (total)	DKT
Amber Durum wheat	ADU	Dark, Hard, and Vitreous	DHV
Animal filth	ANFL	Dark Northern Spring wheat	DNS
Angoumois moths	MOTH	Defects (total)	DEF
Badly stained	BADS	Dehulled	DH
Badly weathered	BADW	Dent	DENT
Barley	BLY	Diatomaceous earth	DIAT
Bird excreta	BRDX	Distinctly discolored	DISC
Bleached	BLCH	Distinctly green kernels	DGK
Blight	BLIT	Distinctly low quality	DLQ
Blue aleurone	BLAL	Dockage	DKG
Blue barley	BLB	Durum wheat	DU
Blue Malting barley	BLMB	Dyed	DYED
Bottom not sampled	BNS	Ergoty	ERG
Bright	BRIT	Erucic acid	ERC
Broken corn	BC	Extra heavy	EHVY

Broken corn and foreign material	BCFM
Broken glass	GLAS
Broken kernels	BN
Broken kernels and foreign material	BNFM
Canola	K
Castor beans	CSTB
Choice	CH
Class	CL
Coarse	CRSE
Cockleburs	CBUR
Commercially objectionable foreign odor	COFO
Contrasting classes	CCL
Conspicuous admixture	CADM
Corn	C
Crotalaria	CROT
Cultivated sunflower seed	CSF
Damaged kernels	DK
Fine foreign material	FINE
Flaxseed	FLAX
Flint	FLIN
Frost-damaged kernels	FDK
Flint and Dent	FLAD
Foreign material	FM
Foreign material other than Rye	FMOR
Foreign material other than Wheat	FMOW
Foreign material other than Wheat or Rye	FMWR
Garlic bulblets	GARB
Garlicky	GAR
Glucosinolates	GLUC
Grain	GR
Handpicked	HP
Handpicked foreign material	HPFM
Hard Amber Durum wheat	HADU
Hard kernels	HARD
Hard Red Spring wheat	HRS
Hard Red Winter wheat	HRW

Hard and Vitreous kernels of Amber Color	HVAC
Hard White wheat	HDWH
Heat-damaged kernels	HT
Heating	HTG
Heavy	HVY
Inconspicuous admixture	IADM
Insect-damaged kernels	IDK
Infested	INF
Injured-by-frost	IBF
Injured-by-heat	IBHT
Injured-by-mold	IBM
Large stones, etc.	LGST
Light garlicky	LGAR
Light smutty	LSM
Limed	LIME
Machine-separated broken kernels and foreign material	MSFM
Malting barley	MB
Materially weathered	MWTH
Mechanically separate dockage	MDKG
Other White wheat	OWH
Plump	PL
Protein	PROT
Purple mottled or stained	PMS
Red Spring wheat	RS
Rodent excreta	RODX
Rye	RYE
Sample grade	SG
Sclerotinia	SCT
Scoured	SCOR
Shrunken and broken kernels	SHBN
Similar seeds	SS
Six-rowed barley	SRB
Six-rowed Malting barley	SRMB
Six-rowed Blue Malting barley	SRBM
Slightly weathered	SLW
Skinned and broken	SKBN
Smut balls	SBAL
Smutty	SMUT
Soft Red Winter wheat	SRW
Soft White wheat	SWH

Mixed	X	Sorghum	S
Mixed corn	XC	Sound barley	SBLY
Mixed grain	XGR	Sound oats	SO
Mixed sorghum	XS	Sour	SOUR
Mixed soybeans	XSB	Soybeans	SB
Mixed wheat	XWHT	Soybeans of other colors	SBOC
Moisture	M	Splits	SPL
Mold-damaged kernels	MDK	Stained	STND
Musty	MUST	Stinkbug damaged	SKD
Northern Spring wheat	NS	Stones	STON
Not standardized grain	NSG	Stress cracks	SC
Oats	O	Subclass	SCL
Odor	ODOR	Sulfured	SULF
Oil	OIL	Sunflower Seed	SF
Other classes	OCL	Tannin sorghum	TANS

Other colors	OCOL	Test weight	TW
Other damaged kernels	ODK	Thin	THIN
Other grains	OG	Total other material	TOM
Other live insects injurious	***	Treated	TRET
to stored grain	OLI	Triticale	TRIT
Other types	OT	Two-rowed barley	TRB
Two-rowed Malting barley	TRMB	Unclassed wheat	UNCL
Unknown foreign substance	FSUB	Waxy	WAXY
Weevils (live)	LW	Western White wheat	WWH
Wheat	WHT	Unsuitable malting type	UMT
Washed	WASH	Wheat of other classes	WOCL
White aleurone	WHAL	White Club wheat	WHCB
White corn	WHC	White sorghum	WHS
White wheat	WW	Wild buckwheat	WB
Wild brome grass seed	WBG	Wild oats	WO
Yellow corn	YC	Yellow soybeans	YSB